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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,359	08/31/2006	David Lowell McNeely	PU030060	9290
24498 7590 10/31/2007 THOMSON LICENSING LLC Two Independence Way Suite 200 PRINCETON, NJ 08540			EXAMINER WANG, TED M	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,359

Applicant(s)

MCNEELY, DAVID LOWELL

Examiner

Ted M. Wang

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-28, 32, 33, 38, 39, 42 and 43 is/are rejected.
- 7) ☒ Claim(s) 29-31, 34-37, 40, 41 and 44-46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/31/2006.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Preliminary Amendment

1. The preliminary amendment filed on 8/31/2006 has been entered.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 36 is objected to because of the following informalities:

- In claim 36, line 1, change "32" to --- 35 ---.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject

Art Unit: 2611

matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of the instant application in view of Tanaka et al. (US 4,349,502).

- With regard claim 25, the admitted prior art of the instant application discloses a method for transmitting program signal, comprising the steps of:

- receiving the program signal (Fig.1 CONTENT 1);

- receiving second program signal (Fig.1 CONTENT 2);

- transmitting the encoded program signal via a first transmission channel (Fig.1 element 16a output); and

- transmitting the second program signal via a second transmission channel that is independent of the first transmission channel (Fig.1 element 16b output).

The admitted prior art of the instant application discloses all of the subject matter as described in the above paragraph except for specifically teaching encoding the program signal using the second program signal and a first function.

However, Tanaka et al. teaches encoding the program signal using the second program signal and a first function (Fig.4 element 4B, encoder, where the first function is the XOR) in order to generate an error detecting code word, such as CRC word. Error detecting code generators are known to those of ordinary skill in the art, and the use of error detecting code words to detect the presence

Art Unit: 2611

of one or more errors in block of data words also is well known (column 7 lines 1-10) to improve transmission quality.

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the encoder (Fig.4 element 4B) as taught by Tanaka et al. to replace the encoder 1 (Fig.1 element 12a) of the admitted prior art of the instant application so as to improve the transmission quality as addressed in the above paragraph.

- With regard claim 26, the modified circuit of the admitted prior art of the instant application and Tanaka et al. further teaches time aligning the program signal and the second program signal prior to the step of encoding the program signal (Fig.4 elements 5₁ and 5₂ of Tanaka's reference).
- With regard claim 27, the modified circuit of the admitted prior art of the instant application and Tanaka et al. further teaches wherein the first function is a XOR function (Fig.4 element XOR inside element encoder 4B).
- With regard claim 28, the admitted prior art of the instant application further discloses wherein transmitting the encoded program signal comprises upconverting the encoded program signal (Fig.1 element 16a UNCONVERT) and providing the upconverted signal to a combiner (Fig.1 element 18) that combines the upconverted signals with a plurality of program signals on different transmission channels (Fig.1 elements 16a – 16N and 18).

Art Unit: 2611

6. Claims 32, 33, 38, 39, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ling et al. (US 6,961,388) in view of Tanaka et al. (US 4,349,502) and the admitted prior art of the instant application.

- With regard claim 32, Ling et al. discloses a receiver apparatus, comprising:
 - a plurality of receivers capable of simultaneously receiving a plurality of program signals from respective independent channels associated with each of the receivers (Fig.1 elements 154a – 154r); and
 - decoder (Fig.1 element 162), coupled to the plurality of receivers.

Ling et al. discloses all of the subject matter as described in the above paragraph except for specifically teaching a decoder for processing a first encoded program signal received from a first transmission channel using a first function and a second program signal received from a second transmission channel, which is independent of the first transmission channel, to thereby decode the first program signal.

However, Tanaka et al. teaches a decoder (Fig.8 element 8B) for processing a first encoded program signal received from a first transmission channel using a first function (Fig.4 and Fig.8 elements SW13, SP11 and SQ11) and a second program signal received from a second transmission channel, which is independent of the first transmission channel (Fig.4 and Fig.8 elements SW1), to thereby decode the first program signal (Fig.8 element 8B) in order to correct an erroneous data word and to clear the error flag signal associated with

word (column 16 lines 48-50) so that the quality of the communication can be improved.

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the decoder as taught by Tanaka et al. to replace the decoder of Ling's in order to correct an erroneous data word and to clear the error flag signal associated with word so that the quality of the communication can be improved.

- With regard claim 33, the modified circuit of Ling et al. and Tanakas et al. further discloses wherein the decoder includes means for time aligning the first encoded program signal with the second program signal prior to decoding the first encoded program signal (Fig.8 elements 19₁ - 19₃).
- With regard claim 38, which is a mean plus function claim related to claim 32, all limitation is contained in claim 32. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 39, which is a mean plus function claim related to claim 33, all limitation is contained in claim 33. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 42, which is a method claim related to claim 32, all limitation is contained in claim 32. The explanation of all the limitation is already addressed in the above paragraph.

Art Unit: 2611

- With regard claim 43, which is a method claim related to claim 33, all limitation is contained in claim 33. The explanation of all the limitation is already addressed in the above paragraph.

Allowable Subject Matter

7. Claims 29-31, 34, 35, 37, 40, 41 and 44-46 are objected to as being dependent upon an objected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

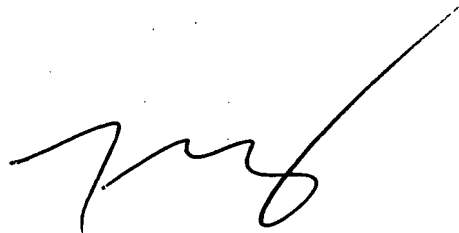
8. Reference(s) US 6,023,783 are cited because they are put pertinent to the error correction coding. However, none of references teach detailed connection as recited in claim.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M. Wang

A handwritten signature in black ink, appearing to be 'Ted M. Wang', written over a horizontal line.

Ted M Wang
Examiner
Art Unit 2611